

REMARKS

Claims 1-50 are pending in the application.

The Examiner deems allowable claims 2-12, 15-16, 19-30, 33-36, and 48 if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner rejects claims 1, 13, 17-18, 31, 37-44, 46-47, and 49-50 under 35 U.S.C. § 102(e) as being anticipated by Suga et al. (U.S. Patent No. 5,832,143). The Examiner rejects claims 14, 32, and 45 under 35 U.S.C. § 103(a) as being unpatentable over Suga.

The Applicants amends claims 2-6, 10-13, 16-17, 19, 23-26, 33-34, and 48.

Claims 1-50 remain in the application.

The Applicants add no new matter and request reconsideration.

Claims Allowable

The Applicants thank Examiner Tucker for his indication of allowable subject matter. The Applicants rewrite claims 2, 6, 10, 16, 19, 26, 33, 34, and 48 in independent form. Claims 2-12, 15-16, 19-30, 33-36, and 48 are in condition for allowance.

Claim Rejections Under § 102(b)

The Examiner alleges every element and limitation recited in claims 1, 13, 17-18, 31, 37-44, 46-47, and 49-50 is disclosed by Suga. The Applicants disagree for the reasons that follow.

Claim 1 recites *assigning a numerical value $A[k]$ to a direction $D[k]$...where $A[k]$ is defined for indicating the likelihood of an edge crossing said pixel position along said $D[k]$ by quantifying the degree of similarity between a pixel segment $seg[k,x]$...and a pixel segment $seg[k,y]$* Claim 18 includes a similar recitation. Claim 41 recites *detecting an edge along a plurality of pre-defined directions intercepting effectively at said pixel position by selecting a pre-defined direction based on a numerical ranking assigned to said plurality of pre-defined directions, wherein each of said pre-defined directions has a non-zero slope.* Suga does not disclose any numerical value $A[k]$ associated with an image edge. Suga's inter-block correlational value $S(k)$ "based on the sum of the differences between the reference pixel data partitioned in blocks." Suga, column 11, lines 44-45 and 50. Suga's modified inter-block correlational value $T(k)$ introduces correcting coefficients $\alpha(k)$ and $\beta(k)$

to the value $S(k)$. Suga, column 11, lines 56 and 62-66. Suga does not appear to disclose the likelihood of an edge crossing or of detecting an edge crossing as recited.

Claim 1 recites *performing a segment analysis ...to verify said symmetric segment pair as belonging to an edge crossing and in response to said $D[m]$ having been verified by said segment analysis, performing spatial interpolation at said pixel position along said $D[m]$* . Claims 18, 39, 41, 43 and 49 include similar limitations. Suga does not disclose performing such segment analysis or spatial interpolating the pixel responsive to the verification of the segment analysis recited in claims 18, 39, 41, 43 and 49. Nor does Suga disclose performing a plurality of verifications as recited in claims 39, 43, and 49.

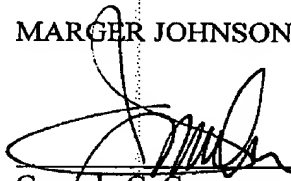
CONCLUSION

For the foregoing reasons, the Applicants request reconsideration and allowance of all remaining claims as amended. The Applicants encourage the Examiner to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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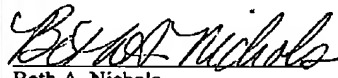
Respectfully submitted,

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I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via facsimile number (703) 872-9306, on October 14, 2004.


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